

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

**International File Reference  
PCT/EP2005/000498**

1. Reference is made to the following documents:

D1: US-A-5 056 986 (SILVESTRI JR GEORGE J ET AL) 15  
October 1991

D2: WO 00/28190 A (REICHERT ARND; BECKER BERNARD (DE);  
SIEMENS AG (DE)) 18 May 2000

2. Document D1 is considered to be the closest prior art with respect to the subject matter of claim 1. It discloses (the references between parentheses relate to this document):

A turbomachine (see figures 1, 6 and 7 and column 1, lines 12-36) having an axially displaceable rotor (see column 1, lines 22-26) and having an annular duct (see figures 1 and 6) which is provided in a casing and forms an annular flow duct, narrowing in the axial direction, between a rotationally fixed outer guide surface (see figures 1 and 6) and an inner guide surface (see figures 1 and 6) arranged on the rotor, having at least one fixed ring (see figures 1 and 6) of guide profiles, which is arranged in the annular duct, and having at least one ring of moving profiles, said profiles extending in each case between a platform (see figures 1 and 6) and an end, opposite the platform, of a moving or guide blade, respectively, the end of each moving or guide blade being opposite a respective axial section (see figures 1 and 6) of one of the two guide surfaces, with a respective radial gap being formed (see figures 1 and 6), the size of each radial gap being constant at least over the displacement distance of the rotor (see figures 1 and 6), and the radial gap running parallel (see figures 1 and 6) to the rotation axis of the rotor.

The subject matter of claim 1 therefore differs from the known turbomachine in that the end of the moving and guide blades, respectively, is designed to be exposed.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention can therefore be considered that of avoiding an increase in the flow losses of the compressor during an axial displacement of the rotor.

The solution proposed in claim 1 of the present application for this problem therefore involves an inventive step (PCT Article 33(3)) for the following reasons:

Document D1 discloses a compressor of a gas turbine having rings of guide and moving blades arranged alternately one behind the other. The guide and moving blades are provided with respective shroud bands. The gas turbine of document D1 involves an arrangement for regulating the axial position of the rotor in order to maintain a predetermined axial distance. D1 therefore could not provide a person skilled in the art with any indication as to how to modify the arrangement of document D1 according to the present invention. The gas turbine of document D2 does not comprise a radial gap which is constant over the displacement distance of the rotor.

3. Claims 2-9 are dependent upon claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.